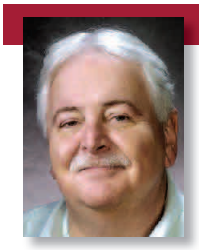

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Texting Off the Grid

A New York-based company known as goTenna has released a couple of devices with off-the-grid communication specifically in mind. The first unit to hit the market was the first generation model designed to directly link two or more people over a distance of a couple of miles, depending on the terrain.

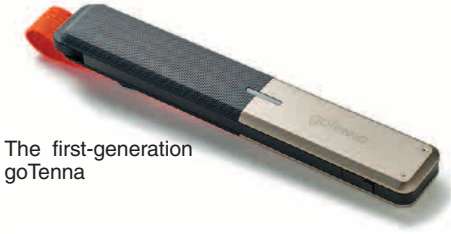
At the heart of this model is a 2 W data transceiver operating between 151 and 154 MHz. The enclosure is only about 6 × 1 × 0.5 inches, and it includes a rugged strap that you can attach to your belt or any other convenient point. There are no buttons or other controls; you simply raise the antenna and the goTenna is on the air.

You and your buddy must have either *Android* or *iOS* smartphones with the free goTenna app installed. The smartphones, in turn, use their Bluetooth links to connect to their goTennas. If you want to send a text to your friend, you simply type within the app and away it goes. The apps also exchange GPS data, so you can view your respective locations on built-in maps (no need to download maps from the cellular network).

goTenna Mesh

Texting with your hiking buddy is a fine thing, but what has really grabbed the attention of public service-oriented amateurs is the new goTenna Mesh.

These are UHF data transceivers that expand the usable range considerably. Instead of limiting communication to just two individuals, the Mesh units are capable of creating a grid of "intelligent" goTennas that are aware of each other's presence. Texts and location information travel from the sender to the receiver through this ever-changing mesh network. All routing is automatic and utterly transparent to the users.



The first-generation goTenna

The goTenna Mesh.

Imagine a dozen goTenna Mesh users spread through an area of several square miles or more. Their units automatically combine to create a network in which data routing is extremely fluid. If one person drops out of the network because they entered a building, for example, the rest of the network instantly adapts and reconfigures itself.

Public Service Tools

The applications of goTenna in a public service role should be fairly obvious. Amateurs have been exploiting similar mesh technologies for years, but this brings it down to tiny wearable devices. Hams can go into the field with handheld or mobile rigs for voice communication while carrying goTennas for location sharing and texting.

According to Mike Corey, KI1U, ARRL Emergency Preparedness Manager, "While the goTenna isn't an Amateur Radio device, it does provide a unique tool in the emergency communications toolbox. The ability to text and send maps between users would be valuable in cases of search and rescue, or in back country where cellular networks are scarce. The cell phone, to an amateur, is not a competitor but a communications capability multiplier, and this brings a whole new dimension to it. It also should be a reminder to us of the value of text communications in a tactical situation; text is now what voice once was to the average person — something we should keep in mind when we think of how we provide communications."

The point-to-point goTenna model sells for $149 for a pair of transceivers at **www.gotenna.com**. The current price of goTenna Mesh (also a pair of transceivers) is $179. While the smartphone app is free, there is also an enhanced app that you can purchase with an annual subscription. The *goTenna Plus* app provides topographic mapping and the ability to make a "last mile" connection to the cellular network.

Hacking Hams

goTenna is one of those devices that seem ripe for Amateur Radio hacking. Fortunately, goTenna welcomes developers and others to explore these little transceivers. They even have a developer page on their website at **www.gotenna.com/pages/sdk**.

We plan to turn our goTennas over to the tender mercies of our hacking team to see what they can do. It is in the finest tradition of Amateur Radio, after all!